BACHELOR OF COMPUTER APPLICATIONS (Pre-revised)
(BCA)
Term-End Practical Examination
June, 2018

00021

CS-72(P)/S3 : C++ AND OBJECT ORIENTED PROGRAMMING

Time : 2 Hours   *Maximum Marks : 100*

(Weightage : 15%)

Note : (i)   *There are two **compulsory** questions in this paper carrying 40 marks each. Rest 20 marks are for viva-voce.*

(ii) *You must write appropriate main( ) function and test your programs.*

(iii) *Write / print your programs, input and results on your answer-sheet.*

(iv) *Make and state suitable assumptions, if any.*
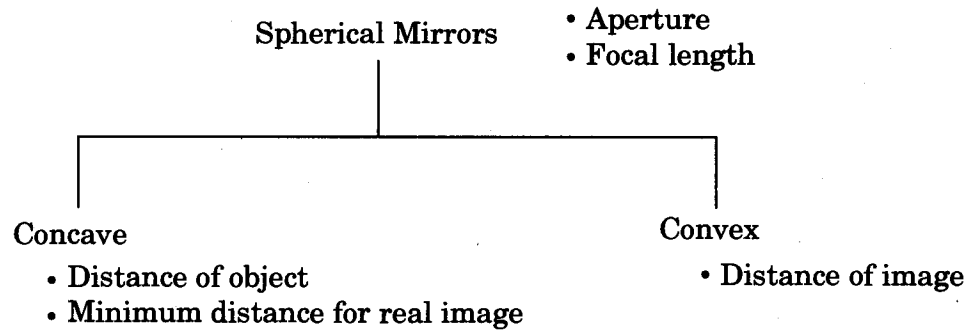
1. Design and implement a class "Textbook" using C++. The class should have the following data members and member functions :

    *   Data members of the class should include :
        *   Book ISBN number
        *   Title
        *   Author (first)
        *   Publisher
    *   The member functions of the class should include :
        *   A function that inputs data values in the data members of an object of "Textbook" class.
        *   A function that displays the data values stored in the data members of an object of class "Textbook".

    Write appropriate main( ) function that creates an array of three objects of the class "Textbook". The main( ) function should demonstrate all the functions of the given class.   *40*

2. Consider the following class hierarchy along with suggested data members :

Spherical Mirrors
• Aperture
• Focal length

Concave
• Distance of object
• Minimum distance for real image

Convex
• Distance of image

Design and implement the classes in the hierarchy using C++. You may add more data members, if needed. You should include at least one constructor in each class. All the classes should have one member function print_mirror_info( ) that should display all the information of the object of that class. Demonstrate polymorphism using the print_mirror_info( ) and main( ) functions.   *40*